State of California

Department of Information Technology

Quarterly Report

April 15, 2000

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Executive Summary

In his January 5, 2000 State of the State address, Governor Davis acknowledged the success of the Y2K Project, with this statement: "Computers are still working, prisoners are still behind bars and airplanes are still flying. I want to thank our entire Y2K compliance team, headed by Eli Cortez and all of the public and private sector participants for a job well done."

As of April 2000, the Department of Information Technology (DOIT) continues to report no Year 2000 (Y2K) related problems with critical State information technology (IT) systems. In addition, Leap Day (February 29, 2000), a potential source of date calculation errors as well, passed by uneventfully. These results demonstrate the success of the Y2K program and the extensive efforts of the State's IT professionals and partners. Because of the lack of serious problems, DOIT rescinded a moratorium on non-Y2K-related modifications to State IT systems. This early rescission allowed State entities to move forward on new IT projects.

It is evident that the rigor of the State's Y2K program was what was required from the outset. From the initiation of the baseline departmental assessments, through independent verification and validation of State entity efforts, the extensive testing program, and the submission of tested contingency and continuity plans, all of the efforts of our Y2K program came together to achieve successful results. The State also contracted with a leading, independent information technology research organization to review and validate the program. That review showed the State's Y2K program had a high conformance to industry best practices.

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At the beginning of 1999, the State of California faced the monumental task of coordinating the disparate Y2K remediation efforts of 113 State entities to ensure that the State was adequately prepared for the rollover to 2000. In January 1999, the State reported it was less than 70% complete with its Y2K remediation activities. This was based solely upon self-reporting by State entities; no single, consistent measure was used across the entities.

The State Auditor, in a February 1999 Audit Report, made a similar observation when he recommended that the state appoint an independent quality assurance agent or independent verification and validation group to review critical systems that support vital program areas. The report expressed concerns that many of the agencies they reviewed

that provide the most critical services were still not done, many had not completely tested their systems, or corrected or replaced the embedded chips that control certain activities.

To bring the Y2K preparedness issue to the forefront, Governor Davis issued Executive Order D-3-99 in February 1999 and mandated that ensuring the Y2K readiness of all State IT systems be the top IT priority for the State. The Executive Order D-3-99 also granted DOIT and the new State Chief Information Officer (CIO) the support and sponsorship of the highest levels of California government to accomplish this daunting task.

Overall, there are numerous benefits and outcomes of this focused Y2K effort. In summary, these benefits include:

- 100% Y2K readiness of all mission critical systems prior to rollover
- No interruptions to mission critical services for any Y2K reason as of this date
- Creation of a Program Management Office (PMO) at the Event Management Center (EMC) to coordinate the State's activities
- Trained the DOIT staff to lead PMO operations in an enterprise-wide mode
- Collaboration, teamwork and partnerships amongst State entities, Federal agencies, counties, private sector and vendors
- Recognition of the significance technology has in the day-to-day operations of the State
- Initiated focus on IT security statewide
- Improved relationships with Legislative oversight committees
- Increased guidance, advice, and information sharing from California's leading technology and financial services companies through the Governor's Y2K Business Council
- Increased communication and heightened collaboration with and engagement of county CIOs
- Improved project documentation standards
- Focused outreach to communities and constituencies on Y2K issues
- Development of standard methodologies and metrics for coordination and management of an enterprise-wide IT initiative
- Increased communication and partnering between the business and technical staff within State entities
- Communication and outreach to local governments and communities through conferences and presentations produced through collaboration among the DOIT, the Governor's Office of Emergency Services (OES), the Department of Corrections, the Department of Water Resources, the Department of Health Services, Department of Financial Institutions, Department of Justice, the State Water Resources Control Board, the California Highway Patrol, and the California Energy Commission.

- Increased internal communications within State government through newsletters and other means
- Development of robust and bold status reporting through an award winning public web site
- Improved system and external interface testing processes and practices
- Establishment of a continuity plan for business methodology to ensure the continuous delivery of essential services in the event of a Y2K system or infrastructure disruption
- Establishment of contingency plans for specific IT systems
- Partnerships with critical government entities
- Training for State Legislative staffs on Y2K issues
- Y2K configuration freeze to ensure stability of the State's computing environment
- Sharing of State resources to assist other State entities
- World-wide collaboration for Y2K readiness through the Follow the Sun program
- Coordination with bordering states' Y2K programs

Based on these successes and lessons learned from the Y2K experience, the State is now positioned to capitalize on the key components of this important project to manage and oversee other IT efforts, including managing the risk associated with delivering large-scale projects.

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The remainder of the Executive Summary describes the cornerstones of the DOIT's approach to ensuring the State did all it could to prepare the State's IT environment for the new millennium.

To fully ascertain the State's level of preparation and begin to consolidate the effort, the "umbrella strategy" was introduced. Under this strategy, the Y2K PMO was created to serve as an umbrella to provide direction and oversight for State entities. This strategy was designed to fully leverage all resources at the State's disposal to maximize the use of time remaining to prepare for and to create a contingency for ensuring that essential services would be delivered if preparations were not complete. Although it was specifically designed to address the Y2K problem, it was recognized at the time that the PMO structure had potential to serve as a model for IT projects management for the future.

As part of the strategy, the Y2K PMO was implemented in March 1999 to manage the coordination, collection and reporting of data related to the ongoing Y2K readiness progress across 113 State entities. The Y2K PMO developed standard methodologies and metrics for all State entities to use in tracking their independent Y2K projects. The

Y2K PMO also collected status information, coordinated outreach and communication activities, and performed other oversight tasks.

The effort undertaken from February 1999 through December 1999 was an example of unparalleled cooperation among State entities. The pervasive and organization-wide nature of the Y2K problem helped forge an environment and culture of collaboration and teamwork. Under the program leadership of DOIT, the focus on Y2K prompted unprecedented weekly meetings with CIOs, Y2K project managers and high-level technology employees from all State entities in attendance, as well as the entity directors as necessary.

The California Legislature was also an active participant in the State's Y2K program. Assemblyman John Dutra, the Chair of the Assembly Committee on Information Technology, held seven formal hearings throughout the state. Mr. Dutra and the other committee members focused on the Year 2000 readiness of local government and initiatives. The State Chief Information Officer participated in each of these hearings. In July 1999, the committee issued a comprehensive report that described in detail its findings. The Legislature also held three oversight hearings under the auspices of the Assembly Committee on Information Technology, the Senate Committee on Energy, Utilities and Communications (Senator Debra Bowen, Chair) and the Senate Select Committee on Economic Development (Senator John Vasconcellos, Chair). At the final oversight hearing, Senator Debra Bowen stated that DOIT did all it could to remediate the States' Y2K problems.

In addition, the State CIO renewed focus and raised the bar on testing for the exchange of information with the counties who are vital partners in the delivery of essential State services to California. For the first time, DOIT, along with representatives from State entities and county CIOs, met on a regular basis to resolve the remaining issues regarding the preparation of critical interfaces. DOIT partnered with the Governor's Office of Emergency Services (OES) to coordinate preparation efforts. The Governor's Follow the Sun Program tracked technology incidents around the world that had a potential impact on the State's technology environment.

Furthermore, DOIT worked in partnership with the vendor community to help the State complete preparations for the millennium. DOIT utilized vendors to conduct the initial detailed department assessments (DDA), which established a new baseline from which to measure progress using industry best practices and standardized metrics and measurements. DOIT utilized an independent verification and validation (IV&V) vendor to ensure entities with mission critical systems or processes had taken and documented the appropriate steps to adequately prepare. Also, DOIT utilized a vendor experienced in PMO concepts and operations to create a PMO to monitor and oversee the State's Y2K efforts.

Recognizing the vast capabilities and expertise of the high-tech and other industries that fuel California's economy, Governor Davis appointed the California Y2K Business Council to assist the State of California in preparing for the year 2000. The Council, which represented some of the best and brightest Year 2000 strategists from core technology companies, financial companies, and the educational environment, provided tremendous insight and expertise which contributed greatly to the success of California's Y2K Program. The Council convened monthly, from March 1999 through January 2000, to share information, educate, plan and collaborate on the Y2K effort and as needed on a more informal basis to collaborate on specific Y2K issues and challenges facing the State. Specifically, the Council:

- Provided advice and assistance on policies, procedures, and projects to resolve the Y2K problem
- Provided ongoing review of the State's strategies, plans and progress
- Contributed best practices and proven solutions in areas such as project management, testing, and business continuity and rollover planning
- Explored areas where public/private partnerships enhance and expedite the Y2K effort

Agency Secretaries provided additional executive leadership to ensure the State's Y2K programs were on track. Through frequent monitoring of their entities' programs, they ensured sufficient resources were being applied and that the Y2K programs received the highest priority.

New relationships and avenues of communication were formed to address technical issues regarding Y2K. The enterprise-wide cooperation of State entities was also demonstrated through the sharing and loaning of State staff between entities to share expertise and provide the staffing levels necessary to meet milestones for Y2K readiness. For example, staff from one entity provided expertise in embedded systems for another entity to ensure their redemption efforts were completed on time. These relationships extended not only between departments but between agencies as well.

Further, the Diamond Team was created to coalesce the expertise of DOIT, the Department of General Services - Telecommunications, the Stephen P. Teale Data Center (TDC), and the Health and Human Services Data Center (formally the Health and Welfare Data Center). The team framework allowed these experts to share resources and revamp key business processes to eliminate or minimize the barriers associated with the business processes related to remediating the State's key IT systems. For example, in collaboration with the Director of the Department of Finance, DOIT spearheaded a streamlined funding process that ensured State entities' Y2K funding needs were quickly met.

DOIT also issued several Y2K Directives to help ensure the required focus on Y2K. For example, to ensure that errors were not introduced into a Y2K ready environment a "freeze" on the introduction of additional changes was established. This temporary moratorium on information system upgrades and changes helped isolate any Y2K issues that may have arisen. The Y2K Business Council suggested this moratorium.
DOIT also advocated a policy of full and open readiness disclosure throughout the preparations for Y2K. This program approach DOIT emphasized was prescriptive. It was designed to identify status, create accessible assistance and ensure essential service delivery.

The DDAs conducted by independent vendors allowed the entities to define mission critical and department critical systems and to ascertain the baseline Y2K readiness status for each system. Mission critical was defined as those automated systems whose unavailability or failure, partial or complete, would significantly impact or impair the successful delivery of a vital government service or mission. This included public safety, public health, law and justice, environmental protection, human services, and mission critical operations. The IV&V of the DDAs were conducted to affirm the information through the review of physical documents and to identify any additional issues that required resolution prior to Y2K. Weekly updates to the assessment baseline information were provided to the Y2K PMO and posted on the Year 2000 web site for public access and review.

The IV&V identified numerous concerns that required attention. Examples include components of mission critical systems not previously identified as mission critical, additional system testing required, lack of generators for emergency power backup, and requirements for additional resources needed to ensure timely completion of activities.

In addition to tracking weekly status, DOIT's approach called for the relentless focus on remaining tasks and activities at each entity. While remediation focused on mission critical applications, DOIT released a Y2K directive reminding entities of the importance of completing department critical applications. For those mission critical entities that were not 100% ready for Y2K, detailed corrective action plans (CAPs) were developed and monitored by the Y2K PMO. Weekly updates by each entity provided the Y2K PMO with a snapshot of the progress to date and the anticipated future progress. Also, the Year 2000 web site posted color-coded status reports for each entity, as well as reports showing progress against the corrective action items. Those entities that were more than 90% complete with remediation were colored green, indicating a low risk associated with those entities' overall readiness. Those less prepared were colored either yellow or red, indicating higher levels of risk. The public posting of the simple, color-coded reports proved to be a significant motivational incentive and created a sense of urgency for all State entities to work together to complete their Y2K readiness efforts. It also brought the business side of each entity together with the technical side to remediate

problems from multiple perspectives and ensure that plans were in place to continue business operations should the systems fail during the Y2K rollover.

In order to ensure the delivery of essential services regardless of the state of the technology environment, DOIT utilized the Y2K PMO to ensure that all State entities had a CPB in place prior to the Y2K rollover event. This requirement was met on October 15, 1999, by all State entities. Each entity certified, through signatures up to and including the agency secretary, that their CPB plan was both complete and tested.

Due to the focused efforts of entities throughout State government, the vast majority of the State's information systems were ready by September 1, 1999. Entities with mission critical information systems that were not ready received a heightened focus of attention from DOIT and the Y2K PMO. DOIT's plan called for an increased level of involvement to ensure that those entities had completed their readiness activities and had access to the resources necessary to do so. Those few entities that were not complete by October 15, 1999, became part of the comprehensive performance review process, which required frequent meetings and discussions between the entities and DOIT to review progress and assist with issue resolution.

DOIT's approach to communications required an extensive communication and outreach program that included events co-sponsored by multiple State and private entities to ensure effectively delivery of Y2K information. Forums were held with State IT employees, State and local government information technology employees, infrastructure industry experts, and with members of the public in meetings organized by individual Legislative offices. The Y2K PMO was directly involved in the preparation of information shared during these sessions. DOIT's outreach strategy was designed to defuse unwarranted public concern and to improve awareness of the status of preparation within other industries that had a direct impact on the State. The efforts began in March 1999 with a major outreach conference hosted by DOIT and OES with an attendance of over 800. Additional conferences, industry roundtables, meetings, hearings and other events were conducted on a regular basis throughout the State. These activities were focused on delivering the right information at the right time and continued through the remainder of the year.

Outreach also included the preparation of materials for the Legislature to use in a variety of situations. The materials were shared directly with legislative staffs through a training session and through the DOIT Y2K website. The goals of the information was to provide Legislators with the:

- Most complete and accurate information available about the Y2K issues;
- Y2K information and tools necessary to respond effectively to their constituents' questions and concerns regarding Y2K; and,

- Tools and information necessary to plan and conduct Y2K informational events for their constituents

In order to ensure the quality of the program, DOIT engaged a vendor to conduct an independent assessment of the State's Y2K program. The evaluation was based on a comparison to their PMO best practices. As a result of the comparative analysis, the vendor found DOIT's Y2K program to have a high degree of conformance with their best practices model.

In December, the State achieved 100% Y2K readiness for the mission critical systems. In addition to the effort expended to prepare mission critical systems leading up to the rollover event, DOIT emphasized the importance of adequate preparations of the EMC Communications Center. This facility served as the command center to track Y2K-related incidents, potential technology-related security breaches and to coordinate the deployment of IT resources as required. Throughout the month of December, the Y2K PMO developed rollover procedures, trained State staff to operate the EMC Communications Center during the rollover event, and facilitated the issuance of key directives for reporting incidents to the EMC Communications Center related to Y2K.

The resources expended on Y2K not only ensured that the State's IT systems were compliant, but it also provided an opportunity to modernize some of the IT infrastructure. In addition to the obvious successes of the Y2K program, the state has received many ancillary benefits. These benefits, termed "the silver linings of Y2K" include:

- Vastly improved cooperation and relations with legislative oversight committees
- Increased guidance, advice and information sharing from California leading technology and financial services companies, through the Governor's Y2K Business Council
- Focused outreach to communities and constituencies on Y2K issues
- Proven methodologies for coordination and management of enterprise-wide IT initiatives (PMO, IV&V, testing)
- Significant involvement and engagement of counties
- Development of robust status reporting through public and private web sites (Internet and intranet)
- Improved practices and skills for system and external interface testing

- Documented and tested business continuity plans
- Development of standard metrics to measure performance across all activities for all entities
- Continuous monitoring (as opposed to periodic reviews)
- The consistency that allows management to absorb large volumes of information
- Key indicators that allow decision-makers to focus attention on significant issues
- An enterprise view to measure the effectiveness of IT investments
- Greater coordination of cross-project dependencies
- Standardized project management practices across agencies
- Comprehensive and complete IT inventories for mission critical systems (hardware/software)
- Modernized IT infrastructure
- Improved program and project management
- Increased intergovernmental partnerships
- Improved testing procedures
- Greater organizational visibility of entity CIOs and IT managers
- Identification of the State's critical business processes and systems to facilitate prioritization of resources
- Documented business processes, including the interrelationships with other functions and processes to ensure the coordination of service delivery from an enterprise perspective
- Effective risk mitigation strategies and techniques to minimize interruptions to business operations that could occur at any time, such as power failures, software errors or computer outages

- Documented plans, procedures and instructions to ensure an orderly resumption to business in the event of a service disruption

- Established awareness so that State management and staff understand the implications of a disaster on services

- Increased awareness of the impact of IT on effective and efficient service delivery

- Improved coordination and collaboration between business and IT professionals

- Improved coordination and collaboration among State entities

- Resource/knowledge sharing among State entities and between the State and its public/private sector business partners

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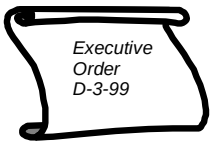
The success of the Y2K effort is not the result of any one person or entity. It was only through the tremendous and collaborative effort of all involved that the State was able to make a smooth transition through the critical dates. Strong executive leadership from the Governor and the Legislature was critical to the success of the effort. The countless hours put in by the State's IT professionals, Y2K project managers, continuity planners, CIOs, and others showed their extraordinary resolve to meet the challenge. The collaborative efforts of the management of the many State entities such as the Governor's Office of Emergency Services (OES) made certain the State was truly ready to meet any potential problems. The sharing of resources, talents, and advice by several State entities, as mentioned elsewhere in this report, ensured all entities were able to complete their efforts within the time available. The cooperation and participation by the State's control agencies, such as the Department of Finance and the Department of General Services, expedited the resolution of administrative and financial barriers. The county government representatives, who committed long hours to ensure a smooth exchange of data with State systems as well as their own remediation and preparation efforts, were critical to the continued delivery of services.

The representatives of the various industries, State and local entities, and others that assisted with and attended the several roundtables were crucial to the outreach efforts that helped to ensure California's various infrastructures and industries were not impacted by Y2K. The exchange of information and peer review efforts with local government entities such as the Los Angeles Department of Water and Power helped to ensure the success of each other's programs. The strong efforts and sage advice from the Y2K Business Council was particularly beneficial and appreciated. The guidance, independent review, and other efforts provided by private consultants helped to ensure the program stayed on time, on track and met the State's goals. Finally, we must recognize all the

DOIT staff that showed outstanding dedication by working with all of the above individuals and organizations through long hours during nights and weekends to ensure that delivery of State services would continue uninterrupted.

Introduction



In an effort to ensure that the change of the century occurred as seamlessly as possible, Governor Davis issued Executive Order D-3-99 in February 1999. The Executive Order identified the Year 2000 (Y2K) challenge as the State's top information technology (IT) priority. Based upon the Executive Order, the Department of Information Technology (DOIT) developed the *California Year 2000 Strategic Plan* to ensure that the Y2K challenge was effectively and appropriately met.

Budget Act of 1999-2000 (SB 160) Requirements

The magnitude of the Y2K effort mandated that status information be reported to the Legislature at regular intervals. The Budget Act of 1999-2000 requires the DOIT to provide the Legislature with a quarterly report regarding the status of the State's mission critical services and IT systems. Specifically, SB 160 requires the DOIT to provide the following information:

- Progress in remediating mission critical systems and system interfaces,
- Names of the entities that provide mission critical services,
    - Names of the IT systems that provide those services,
    - Status of the Y2K remediation activity for those systems,
    - Status of the Y2K remediation activity for any related system interface for those particular systems,
    - Status of the remediation activity for any embedded systems,
    - Summary of the information, and
- Progress in the development of Continuity Plans for Business (CPB), including the names of the entities.

The remainder of this report addresses the specific requirements of SB 160 and focuses on the time period from January 1, 2000 through March 31, 2000, which includes the Y2K rollover period and the conclusion of the State's Y2K Program. It also summarizes the general approach taken to address the Y2K challenge.

DOIT's Vision in Addressing Y2K

The Executive Order D-3-99 heightened the priority of Y2K on a statewide level. Until its issuance in February 1999, there was no coordinated, statewide master plan in place to address the Y2K challenge. However, Executive Order D-3-99 recognized the enormity of the Y2K challenge, and the need for entities to unite under a collaborative approach to obtain success.

DOIT was tasked with developing a standardized approach, to be taken by all entities, to ensure that the Y2K challenge was effectively addressed. DOIT embraced the task of developing this approach. One month after Executive Order D-3-99 was issued, DOIT developed the *California Year 2000 Strategic Plan*, a guide outlining the approach to be taken during the months remaining until the year 2000. The fundamental layer of the "umbrella strategy" was the establishment of the Y2K Program Management Office (PMO). Under this enterprise-wide strategy, the Y2K PMO was created to serve as an umbrella to provide direction and oversight for State entities. This strategy was designed to fully leverage all resources at the State's disposal to maximize the use of time remaining to prepare for and to create a contingency for ensuring that essential services would be delivered if preparations were not complete. Although it was specifically designed to address the Y2K problem, it was recognized at the time that the PMO structure had potential to serve as a model for IT project management for the future.

To fulfill the vision of the "umbrella strategy", the Y2K PMO served as the central information repository for entity information. Processes were implemented to capture consistent entity information, and minimize self-reporting. The information collected during the detailed department assessment (DDA) process was prepared by independent vendors and submitted to the Y2K PMO for ongoing status reporting. The DDA process resulted in an independent baseline from which to measure compliance status, therefore ***minimizing self-assessment***. Furthermore, another independent vendor conducted an independent verification and validation (IV&V) of State entity mission critical system-related documents and artifacts. ***The IV&V process is a distinguishing element of California's Y2K efforts.*** Additionally, the Y2K PMO tracked and monitored county interface testing, and other, high-profile external interface testing, to ensure all aspects of technological interaction were identified.

The unparalleled collaboration among State entities to implement and maintain the approach resulted in success throughout the process as well as through the rollover event. The "umbrella strategy" allowed the EMC Communications Center to capitalize on existing data collection practices and enabled it to serve as the collection point of Y2K-related IT incidents.

Accomplishments

Praise from the Legislative Analyst Office
In their report dated February 17, 2000, the Legislative Analyst's Office (LAO) found that "DOIT has on balance added value to the state's IT program". Specifically, the LAO noted that DOIT has:

- Enacted policies that have significantly shifted procurements from technology-specific and customer-developed solutions to business based, "best value," and commercial off-the-shelf software solutions.
- Strengthened the roles of the data centers in becoming the primary providers of data processing services for state departments.
- Completed a data center consolidation study that concluded that there are limited opportunities for outsourcing and minimal cost savings from consolidating state data centers.
- Provided the leadership that allowed the state to successfully complete Y2K remediation.

DOIT recognizes that much work remains to be done and is actively engaged in working with the Governor's Office, the Legislature, Agency Secretaries, Directors and departmental Chief Information Officers to maximize the return on the State's information technology investment.

State in High Conformance with GartnerGroup's Best Practices
GartnerGroup, a research consulting firm, performed a high-level independent review of DOIT's Y2K program to identify any opportunities for improvement. The State was found to be in high conformance with GartnerGroup's Y2K project management office best practices (see table below).

Best Practice Area	Conformance Rating	Comments
Project Management and Organization	**High**	• Organizational structures, roles and responsibilities well defined. • Good project management team. • Standardized project documentation.
Methodology, Plan and Progress	**High**	• Good compliance strategy and plan in place. • Methodology well documented with specific programs to ensure compliance with methodology. • Focused effort centered on mission critical systems.

Best Practice Area	Conformance Rating	Comments
		• Progress statistics captured frequently.
Scope Coverage	**High**	• All critical systems and systems infrastructures included.
Resource Utilization and Management	**High**	• Resource requirements captured as part of detailed departmental assessment. • Adequacy of resources evaluated by monitoring milestone completion dates.
Continuity Planning	**High**	• CPB process defined and documented. • Process-oriented approach. • Progress captured and validated.
Business Unit Management Support	**High**	• Top-down support exhibited. • Frequent meetings and updates with upper-level management.
Third-Party Vendors and Suppliers	**Medium**	• Addressed at agency level in CPB process. • No specific methodology and tracking mechanism in place at Y2K PMO level for third party vendors and suppliers.
Facilities and Embedded Systems	**High**	• Facilities and embedded systems included in detailed departmental assessments. • Specific methodology in place for embedded systems.
Testing, Certification and Documentation	**High**	• Well defined testing methodology in place. • Certification and clean management programs in place.

Human Resources Program Objectives

The Y2K program increased the State's awareness of its dependency on IT professionals. Also, DOIT worked in partnership with the Department of Personnel Administration (DPA) to develop programs to increase retention of this valuable resource for the State. In recognition of that, this partnership allotted up to $1,200 per month for employees working under arduous conditions for Y2K who were not eligible for overtime pay. In addition, the following program objectives have been identified to further assist our goals:

- Developing IT Project Manager classification for statewide use.
- Addressing inequities annually between state and private sector HR practices that impede the state's ability to hire, train, retain, and reward appropriately skilled professionals.
- Developing new or updating existing IT classifications to meet current and future needs.

- Outlining methods to share resources with the appropriate skills and experience across projects and departments.
- Developing an "on-site" testing and hiring process for IT classifications statewide.
- Assisting supervisors to identify the appropriate internal and external training for their employees to retool their skills to more effectively address project or department skills.
- Developing ongoing recruitment methods for statewide application.
- Providing IT staff resources to the (DPA) to sit at the bargaining table to negotiate IT contracts.
- Developing and implementing an IT bonus program for statewide use.
- Working in partnership with the State Personnel Board and DPA to develop methods to ensure IT classifications and salaries are competitive within the public and private sectors.
- Developing career development opportunities to be used as a statewide model.

Key Milestones (January 2000 – March 2000)

Following the success of the State's Y2K Program, DOIT was left with a number of post rollover tasks. The following are DOIT's completed milestones:

- **Program Management Office (PMO) Knowledge Transfer**—PMO concepts and best practices were transferred from the Y2K vendor to DOIT, as well as Y2K reporting software, databases, templates, and documentation. This transfer of knowledge was successfully completed by February 15, 2000.

- **Leap Day (February 29, 2000)**—The Year 2000 being an unusual leap year, there was potential for date related problems. DOIT monitored this situation by internet, phone, and e-mail. No issues arose on or after Leap Day.

- **Phaseout of the Event Management Center (EMC)**—With the lack of Y2K problems during the rollover, DOIT was able to look at an early phaseout of the EMC. All DOIT staff, equipment, and Y2K documentation were relocated by the end of February, 2000, although the functions were continued through the Leap Day event.

- **Moratorium Lifted**—The Y2K moratorium on non-Y2K-related computer hardware and software changes was lifted on February 3, 2000. The moratorium was originally scheduled to end March 10, 2000, but in light of the success of the Y2K Program, it was lifted early to facilitate information technology activities moving forward.

Silver Linings of Y2K

In addition to the obvious successes of the Y2K program, the state has received many ancillary benefits. These benefits, termed "the silver linings of Y2K," include:

- Vastly improved cooperation and relations with legislative oversight committees
- Increased guidance, advice and information sharing from California leading technology and financial services companies, through the Governor's Y2K Business Council
- Focused outreach to communities and constituencies on Y2K issues
- Proven methodologies for coordination and management of enterprise-wide IT initiatives (PMO, IV&V, testing)
- Significant involvement and engagement of counties
- Development of robust status reporting through public and private web sites (Internet and intranet)
- Improved practices and skills for system and external interface testing
- Documented and tested business continuity plans
- Development of standard metrics to measure performance across all activities for all entities
- Continuous monitoring (as opposed to periodic reviews)
- The consistency that allows management to absorb large volumes of information
- Key indicators that allow decision-makers to focus attention on significant issues
- An enterprise view to measure the effectiveness of IT investments
- Greater coordination of cross-project dependencies
- Standardized project management practices across agencies

- Comprehensive and complete IT inventories for mission critical systems (hardware/software)
- Modernized IT infrastructure
- Improved program and project management
- Increased intergovernmental partnerships
- Improved testing procedures
- Greater organizational visibility of entity CIOs and IT managers
- Identification of the State's critical business processes and systems to facilitate prioritization of resources
- Documented business processes, including the interrelationships with other functions and processes to ensure the coordination of service delivery from an enterprise perspective
- Effective risk mitigation strategies and techniques to minimize interruptions to business operations that could occur at any time, such as power failures, software errors or computer outages
- Documented plans, procedures and instructions to ensure an orderly resumption to business in the event of a service disruption
- Established awareness so that State management and staff understand the implications of a disaster on services
- Increased awareness of the impact of IT on effective and efficient service delivery
- Improved coordination and collaboration between business and IT professionals
- Improved coordination and collaboration among State entities
- Resource/knowledge sharing among State entities and between the State and its public/private sector business partners

Awards

DOIT won three awards associated with its Y2K program. Two of the awards went to the Year 2000 web site. The third went to a DOIT newsletter.

The State Information Officers Council (SiOC) granted a gold award to DOIT for its web site graphic design (www.year2000.ca.gov). The DOIT used this web site as a major communications vehicle for the entire Y2K effort. It contained information to be used by State entities, local government, the legislature and the public. Manuals, handbooks and reports were readily accessible to those who needed them. Those that needed information on the Y2K readiness of individual entities could find the information quickly. Those that needed detailed information on conducting particular Y2K programs such as continuity planning or outreach efforts could also find that information in one of the many online publications. Local governments could find information to help them with their Y2K programs. The number of organizations that have developed links to the site demonstrates the value of the web site's information. A review of a major Internet search site showed several hundred links to the web site from those outside of State government.

The SiOC also presented the DOIT with a silver award for its "Y2K Times" newsletter (http://www.year2000.ca.gov/publications). The newsletter, sent by email to thousands of State employees, communicated the success and challenges of California's Y2K program and provided current status of its progress. It helped to raise awareness of the State's Y2K efforts and ensured that employees throughout State government realized the seriousness of the State's efforts and supported them in every way possible. It also helped to ensure that the State conveyed accurate and consistent information to respective stakeholders.

The other award was given to DOIT by Computer Currents Interactive, the online version of Computer Currents magazine. CCI selected DOIT's Y2K web site as a "Link of the Week" for the week of November 15, 1999, based on its originality, content, and quality for the features noted above.

Y2K Rollover and Phaseout

Y2K Rollover Analysis

The uneventful passing of the Y2K rollover is a reflection of the dedication and collaborative effort by IT professionals within the DOIT, State government and the private sector. The rollover yielded no impacts to mission critical systems in the State of California.

The EMC Communications Center was designed to collect information from State entities as indicated in DOIT's Y2K IT directive. This directive required entities to report technology incidents to the EMC Communications Center that were Y2K-related, out of the ordinary, or involved a breach of data or system security.

Staff from various State government entities and the private sector was on site at the EMC Communications Center 24 hours a day during the rollover period to track incidents directly impacting State of California entities. Staff worked closely with the State's data centers and other major entities to ensure smooth operations continued. EMC Communications Center staff was on site at the Governor's Office of Emergency Services (OES), and OES had staff at the EMC. The EMC Communications Center provided frequent status reports for OES to use in their operations. Entities with mission critical systems were contacted to confirm the status of the mission critical systems. Staff monitored problems from around the world that were reported through the Follow the Sun program as well as the few reported through the news media. Staff conducted shift change meetings to ensure the next shift was always aware of overall status.

No Y2K problems were reported impacting the delivery of mission critical services. The EMC Communications Center received 11 reports of minor Y2K anomalies during the rollover period. The EMC Communications Center staff closely monitored these. Most were resolved within hours and no services were interrupted.

The EMC Communications Center ended its 24-hour vigilance for Y2K incidents on January 4, 2000, reverting to normal operations and staffing on January 5, 2000. However, the Y2K PMO continued to monitor by phone, fax, and e-mail during normal business hours for late-breaking incidents. In fact, post rollover incidents generally were expected in the IT community as systems ran for the first time after the calendar rollover.

Although few Y2K-related anomalies arose during the rollover period, only three manifested themselves afterwards. The first occurred in January 2000, and the next two occurred in February 2000. Each of these anomalies was quickly resolved with no disruption of services and pertained to non-critical systems.

Leap Day Report

Leap Day was an additional concern for the IT industry. It posed potential technology problems because 2000 is a leap year although years ending in "00" are often not leap years. This is due to the complicated formula that determines leap years. Software had to have this implemented correctly to avoid any miscalculations. Preliminary testing in the private sector had shown a 7:1 ratio of Leap Day to Y2K errors. In other words, Leap Day errors occurred seven times more frequently than Y2K errors in preliminary testing. As a result, Leap Day compliance was a serious aspect of the Y2K remediation and testing program.

Because of the great success of the Y2K program (which included leap day awareness), Leap Day had become less of a concern. Furthermore, through a business partner connection, any problems starting in Australia, for example, would be reported to DOIT. Fortunately, no worldwide problems were reported. Nevertheless, DOIT closely monitored the situation by internet, phone, and e-mail, but Leap Day resulted in no reported incidents.

Event Management Center

The Event Management Center (EMC) also served as the Y2K Communication Center for DOIT during the rollover period. The center was staffed with DOIT employees, contract staff, and representatives from the major state entities with mission critical systems 24 hours per day from Friday, December 31, 1999, through Tuesday, January 4, 2000.

Information from state entities, OES, and the Follow the Sun program was compiled and distributed throughout the weekend. Reporting of information continued until March 1, 2000. While the total cost for the EMC will be approximately $9.5 million, the equivalent Federal Government Y2K Information Communication Center cost $50 million.

The Budget Act of 1999 included $17.5 million (General Fund) to pay the Teale Data Center and Health Welfare Data Center for EMC-related costs. Through March 31, 2000, the expenditures to date are $8,047,925 for EMC-related expenditures. The projected final expenditures for the EMC will be approximately $9.5 million, reflecting a savings of $8 million.

Post Y2K

Year 2000 Documentation Retention

On February 14, 2000, DOIT issued a Y2K Directive as a precaution in case of an internal state audit or legal action resulting from Y2K-related IT failures. All state entities were directed to retain records regarding Y2K until March 30, 2005. The records to be retained included all correspondence, system and program documentation, certifications from vendors, project plans, test plans, test scripts, test results, user acceptance, and other documents that could provide evidence of efforts to ensure Y2K compliance or readiness.

PMO Knowledge Transfer

One of the key strategies in implementing the Governor's Executive Order D-3-99 was the establishment of the Y2K Project Management Office (PMO). The Y2K PMO provided coordination and monitoring activities for the State's Y2K efforts as they related to IT mission critical applications. With a private vendor providing many key services for DOIT, the knowledge transfer was a vital component for the contract closure.

While knowledge transfer from the Y2K PMO vendor to the DOIT staff occurred throughout the Y2K PMO effort, given time and resource constraints, DOIT staff did not have the opportunity to fully learn how to perform certain operational activities. Similarly, many of the DOIT staff were focused on specific tasks within the Y2K PMO and may have had a limited understanding of activities outside of their immediate responsibility area. Furthermore, with the urgency of the Y2K effort, staff may not have recognized exactly how the activities they were performing related to traditional PMO concepts and how those activities could be tailored and applied in different settings.

Therefore, given DOIT's desire to leverage the knowledge and experience gained through the Y2K effort, a series of transitional knowledge transfer activities served to fill key knowledge gaps and provide the overall context of the entire Y2K PMO effort. These transfer activities, which were completed by February 15, 2000, included the following:

- *General PMO concepts and activities* — Focused on providing an overview of PMO concepts and activities, how these concepts and activities were used in the Y2K PMO, and how the various PMO activities tie together into a cohesive framework.

- *Program Management/Administration* — Activities related to overall program leadership, management, and administration.

- *PMO Development* — Activities related to the initial development of a PMO. These activities are generally one-time activities related to the identification and development of methodologies, tools, policies and procedures that will be used by the PMO.

- *Oversight/Relationship Management* — Activities related to overseeing the implementation of PMO methodologies, tools, policies, and procedures. Included maintaining relationships with state entities, identifying and resolving issues, and reviewing progress toward program milestones.

- *Operational/Technical Infrastructure* — Activities related to defining, designing, developing, testing, implementing, and maintaining the applications and tools necessary to support the Y2K PMO. Also included activities related to providing technical support to Y2K PMO staff and management of the data stored in the databases.

- *Reporting* — Activities related to producing regular and ad hoc reports for the activities of the Y2K PMO.

- *Communications and Outreach* — Activities related to disseminating information about the program to internal and external stakeholders.

- *Library and Document Control* — Activities related to managing all documentation and reference materials used by the Y2K PMO

While the focus of the knowledge transfer was in relationship to the Y2K effort, knowledge of the conceptual framework can be applied to any PMO.

In addition to the knowledge transfer, each of the major contractors provided the DOIT with recommendations regarding the best practices that could be carried forward. These best practices included:

- Strategic management of the state's investment in technology
- Structured management and oversight (i.e., PMO)
- Cross entity collaboration
- Stakeholder committees
- Improved communication
- Workforce re-tooling and retention
- Resource brokering
- Centers of excellence
- Professional education and knowledge sharing
- Economies of scale

With the success of the Y2K PMO, and the fact that its concepts are an accepted best practice in the private sector, transfer of this knowledge will help DOIT move toward increased sustained performance improvement and self-sufficiency. Therefore, DOIT proposes to adapt these concepts to future management of State IT programs and projects.

Benefits of Y2K

Through the collaborative approach to the Y2K challenge, the State was unified in its efforts, and successfully met its goal. The State was able to strategically and structurally implement an approach that was applicable throughout the entities, to meet a challenge some thought insurmountable. Furthermore, the approach enabled entities to address and resolve issues in a consistent and timely manner. The benefits have been dubbed the "silver linings" of Y2K. In addition to the silver linings previously listed, following is a more thorough discussion of the benefits of the Y2K program.

Reliance on Technology
The Y2K challenge reinforced the fact that society, including the government structure, is heavily reliant on technology. Because of this dependency, the Governor made remediation, with the focus on mission critical systems, a top priority with the issuance of Executive Order D-3-99. Entity IT divisions experienced greater sponsorship of their Y2K initiatives due to the increased emphasis on the technological importance of Y2K. As technology advances are made and implemented, similar sponsorship will be needed. Thanks to Y2K, awareness of the necessity of such sponsorship has been heightened.

Continuity Planning for Business
Executive Order D-3-99 required each state entity to develop an effective and comprehensive plan to ensure the continuous delivery of essential services in the event of a Y2K failure, including a failure which could occur externally. To facilitate compliance with the Executive Order, DOIT, in collaboration with the Governor's Y2K Business Council and other industry experts, developed a comprehensive Continuity Planning for Business (CPB) program. The program includes a methodology to assist State entities with the development of continuity plans for mission critical programs, as well as a strategy to enable DOIT to monitor and track the State's CPB efforts. Each State entity completed its CPB and submitted a signed CPB Readiness Certification form certifying completion of testing, training and implementation activities prior to the Y2K rollover.

While the primary objective of the CPB program was to ensure the continuity of the State's essential services in the event of a Y2K disruption, the State will benefit from these efforts well into the future. Numerous benefits and outcomes resulted from this effort, including:

- Identification of the State's critical business processes and systems to facilitate prioritization of resources

- Documented business processes, including the interrelationships with other functions and processes to ensure the coordination of service delivery from an enterprise perspective

- Effective risk mitigation strategies and techniques to minimize interruptions to business operations that could occur at any time, such as power failures, software errors or computer outages

- Documented plans, procedures and instructions to ensure an orderly resumption to business in the event of a service disruption

- Established awareness so that State management and staff understand the implications of a disaster on services

- Increased awareness of the impact of IT on effective and efficient service delivery
- Improved coordination and collaboration between business and IT professionals
- Improved coordination and collaboration among State entities
- Resource/knowledge sharing among State entities and between the State and its public/private sector business partners

Cooperation and Collaboration

The State experienced unparalleled cooperation and collaboration among State entities, including the sharing of ideas, resources, and personnel. This collaboration also allowed for improved relations with the Legislature, Federal government, local government, and private industry. IT divisions received entity executive sponsorship which accelerated the process. This level of sponsorship will be necessary for future projects in order to facilitate the delivery of products.

Many leaders in State government appreciated the partnerships formed throughout the process. As expressed by C.A. Terhune, Director, Department of Corrections, "DOIT's comprehensive Y2K program provided clearly defined goals, objectives, and criteria. This program made it possible to prepare California Department of Corrections for Y2K and thus maintained our ongoing mission of public safety and security." Additionally, Tomas Alvarado, Director, Department of Veteran's Affairs, stated "The State CIO's commitment to building a partnership and consensus with the Department of Veteran's Affairs was instrumental in our department becoming Y2K compliant." Finally, D.O. Helmick, Commissioner, California Department of Highway Patrol, noted "DOIT's partnership with the California Department of Highway Patrol assured safe and open roadways during the rollover. We appreciate the State CIO's personal assistance and guidance when it was most needed."

County Interfaces

The county interface effort involved the identification of state-county interfaces and tracking the testing status of these interfaces. The DOIT working with State and county IT leaders established working teams to prioritized state-county interfaces. The working teams met biweekly into December to resolve issues and insure all mission-critical interfaces were tested. In addition, the Y2K PMO worked with an independent testing proctor, which was engaged by DOIT, to track the scheduling and execution of all state-county interface testing, and then report that status through the existing Y2K PMO processes.

The Y2K PMO began contacting the counties on September 15, 1999 to obtain testing information. All 58 counties were contacted on a weekly basis to heighten interface testing awareness and collect relevant testing status information. The Y2K PMO in

coordination with the testing proctor tracked the status of more than 1,000 state-county interfaces. As a result of this program's implementation, county testing status updates to the testing proctor increased by 64% in one month.

State and county CIO's determined which interfaces were to be considered as "high priority." These interfaces were those whose impact due to unavailability or failure, partial or complete would significantly impact or impair the successful delivery of the State's vital services. These interfaces, in addition to the counties utilizing these interfaces, were added to each entity's Corrective Action Plan (CAP) and tracked through the existing Y2K PMO structure. In December, all high priority interface testing activities were completed.

Information Security

Electronic information and automated systems are essential to virtually all major State operations. If agencies and departments cannot protect the availability, integrity, and, in some cases, the confidentiality of this information, their ability to carry out their missions could be severely impaired.

Prior to the Y2K rollover event, attacks against State and Federal computer systems increased. These attacks were primarily focused on defacing or "vandalizing" web site content and initiating denial of service attacks. However, these attacks could have had much more serious consequences. Once a single system is compromised, it can be used as a staging area for intrusions into an organization's network. This, in turn, can result in breaches of confidentiality, integrity, or availability of information resources.

Numerous mission-critical business applications in use throughout the State are now accessed by personal computers. Large numbers of these personal computers are subject to potential failure in the event that inadequate security precautions leave them exposed to a fast-propagating millennium virus or worm. Furthermore, the newest strains of computer viruses are able to destroy not only a desktop computer's locally stored files, but also shared files on a remote file server.

DOIT hosted a three-day IT security conference that was attended by State IT professionals. The conference was conducted by an external vendor and provided information pertaining to IT security measures to be taken over the rollover period and in the future. It also ensured equivalent awareness of risks and vulnerabilities across the State.

The Y2K security issues contributed to the "silver linings" generated by the Y2K remediation and contingency planning process. The steps taken by the State to prepare for Y2K technology security issues helped plan for future technology security issues. Collaboratively, State entities worked together to address potential security issues.

Internal Partnerships
The partnerships formed to implement the approach were also a contributing factor to the "silver linings" of Y2K and key to its success. OES and DOIT partnered during the Y2K remediation efforts to ensure open lines of communication were established and maintained. Additionally, DOIT partnered with the Stephen P. Teale Data Center, the Health and Human Services Data Center, and the Department of General Services' Telecommunications Division to form the Diamond Team. The Diamond Team provided the coordination and collaboration of the State's four major technology entities to effectively prepare for Y2K. Several communication and outreach activities, such as Industry Roundtables, were a result of partnerships with various State and private entities. The strength of such partnerships is demonstrated by the success they achieved. As a result, these collaborative partnerships will be expanded and continued into the future.

Project Management
The Y2K challenge demonstrated the effectiveness of large-scale project management. DOIT's approach, utilizing standardized metrics, enabled a uniform statewide measurement of progress. The State's remediation status could be easily analyzed, and areas needing improvement could be quickly identified. Furthermore, establishing the Y2K PMO as the statewide source for the Y2K technology efforts enabled consistent communication and sharing of information.

The benefits of this approach, along with the best practices, have enabled entities to build on the experiences of Y2K in establishing internal PMOs. In addition, with the success of the Y2K project, DOIT is supporting a proposal for a Project Manager classification, establishing a partnership with the Department of General Services' Procurement Engineering Team and the use of the conceptual framework in future State projects.

Entity Systems Data Captured
In order to track the State's remediation efforts, the Y2K PMO captured detailed data on every entity's mission critical IT applications, with high level data captured on all others. Although the data was for the Y2K program, DOIT now has a comprehensive repository of the State's mission critical IT systems that can be maintained and utilized as a resource for future program management.

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The State experienced Y2K success on many levels. The immediate impact of Y2K success was the continued operational status of State service after the rollover. However, additional impacts may still be realized. By capitalizing on the lessons learned during the Y2K process, the State has the opportunity to benefit from these experiences on future large-scale technology initiatives. With the cooperation, cohesion, accountability, and validation of a standardized enterprise management approach that the Y2K program

brought to the State, DOIT stands poised to improve the process even further and to tailor it to programs beyond the year 2000.

The Application of the Y2K Silver Linings

As business demands heighten and new technologies continually emerge, a flexible approach to organizing and managing IT is needed. Traditional approaches will not be effective in adjusting to the business and technology changes ahead. If the management of IT doesn't change, there is a high risk of new technologies being developed in silos throughout the State, as occurred with the initial advent of technology when many state government solutions were developed separately within each state entity.

As a control agency, DOIT is faced with the challenge of reaching an acceptable balance between centralizing and decentralizing the IT governance structure. Experience has demonstrated that there are benefits to both the centralized and decentralized organization and management structures. Given the right governance structure, culture, and implementation, either approach may lead to many benefits.

Because there are compelling benefits to both centralized and decentralized structures, State government may choose to adopt elements of both. Therefore, in the end, debating the structure is less valuable than focusing on how best to implement and manage the organization's IT governance. There are innovative techniques that allow both models to work together. DOIT intends to make use of these techniques, which include:

- Strategic management of the state's investment in technology
- Structured management and oversight (i.e., Program Management Offices)
- Cross entity collaboration
- Stakeholder committees
- Management and communication "best practices"
- Workforce re-tooling and retention
- Resource brokering
- Centers of excellence
- Professional education and knowledge sharing
- Economies of scale

To ensure the successful use of IT, DOIT must and has started to change its approach to managing the State's IT. DOIT will partner with stakeholders, including State entities, the Legislature and public and private sector partners to define the Statewide IT Governance Model and convene stakeholder committees to address specific IT issues and challenges facing our great state.

The state has considerable work ahead to renovate aging systems and to maintain its already significant investment in technology. At the same time, the rapidly changing technologies of the Internet and electronic commerce provide opportunities for government to become effective while supplying an unprecedented level of service to Californians and business partners. By establishing a comprehensive approach to address the developing issues of information technology, DOIT can establish a more effective information technology governance structure. This approach will enable the state to develop proactive information technology solutions that improve state services to the public. It is important to note that the activities proposed by DOIT will be evaluated on the basis of how much value they bring to the state's IT investment, and not merely how many and what type of controls exist. By adapting the lessons learned (silver linings of Y2K), best practices, and strategic partnerships both public and private, DOIT will apply these to ensuring the successful use of technology to enhance the delivery of services to Californians.

Executive Leadership Forums

Looking to the future of State government, the DOIT is currently conducting Executive Leadership Forums in partnership with the Governor's Office for Innovation in Government. These forums are designed to bring together key California State Executives to promote a more efficient and effective state government through forward thinking leadership creating an environment that promotes innovation, creativity and continuous improvement.

With technology continuously changing, these forums provide insight and strategies that focus on industry "best practices" given by experts in management and technology. The forums also provide an opportunity for partnering among IT professionals and business leaders in the public sector. Additionally, this is an excellent opportunity to share thoughts and ideas with public sector partners that have the same challenges utilizing IT to improve service delivery, operation and planning.

The third of the series was held on April 6, 2000, with over 500 State employees in attendance. The forums have been well received by State entities. The April 6, 2000, forum presented a discussion by industry experts on models in governance, enabling the e-government revolution and e-government in action.

Appendix A

Accomplishments from Previous Quarterly Reports

The information contained in Appendix A lists the accomplishments highlighted in the past Quarterly Reports.

The following list highlights some of the key accomplishments achieved by DOIT from February to April 1999:

- **Implemented strategic task forces** to tap the expertise of the technology and business knowledge resident in both the public and private sector of the State.
- **Streamlined the State funding processes and procedures** for Y2K-related expenditures to ensure the prompt delivery of resources necessary to assist the agencies and departments to prepare for Y2K.
- **Convened the Diamond Team** in recognition of the need to coordinate the State's four major technology entities through one collaborative team.
- **Implemented a central Y2K PMO** to establish methodologies for assessing agencies and departments, to assist agencies and departments with planning efforts, and to create a project management office infrastructure that can be utilized by the DOIT for future oversight efforts.
- **Conducted Y2K Partnership Pilot Program with Merced County** to determine how the State's Detailed Department Assessment methodology and toolkit could work in a local government environment**.**
- **Established uniform metrics and a statewide Y2K readiness baseline** to track Y2K preparedness and resource issues in a timely, accurate, and consistent manner**.**
- **Refined and automated the Y2K status reporting process** for State agencies and departments providing monthly status updates on their progress towards Y2K preparedness.
- **Implemented statewide Y2K IV&V process** to ensure that oversight of State efforts is monitored consistently.
- **Facilitated access to Year 2000 specialty vendors and resources** for use by State agencies and departments to effectively address their remediation and testing needs.
- **Increased Y2K awareness in public and private sector** utilizing comprehensive Outreach Programs to educate stakeholders and communicate a message of concern for Y2K.

From April to July 1999, DOIT accomplished the following:

- **Implemented and managed the PMO handbook**, which details policies and procedures followed by the PMO and its affiliates to ensure consistency and appropriate documentation of the State's efforts to prepare for the Year 2000.
- **Created the Y2K PMO library** to maintain all information pertaining to the assessment of each entity throughout the DDA, 48-Hour IV&V Triage, CAP, and high level IV&V processes.
- **Facilitated recent telecommunication network testing** involving HWDC, TDC and PacBell.
- **Initiated a test strategy and planning effort** to ensure validation testing of mission critical systems and associated interfaces.
- **Participated in several Y2K outreach meetings with Assemblyman John Dutra** in local communities throughout the State.
- **Completed detailed department assessments** by independent vendors for State entities. The top 34 entities that provide mission critical services to California have a complete DDA report and have started their CAP efforts.
- **Facilitated Y2K conferences** in conjunction with the Governor's Office of Emergency Services to educate local communities about Y2K issues.
- **Implemented a redesigned Year 2000 web site** to provide additional communication vehicles to the DOIT and the Y2K PMO, as well as to host entity status information**.**
- **Implemented online data capture and reporting** of detailed department assessment results and ongoing progress updates provided by the entities.
- **Implemented 48-hour triage and high level IV&V** to add an additional layer of evaluation and oversight for State mission critical systems identified during the DDA process.
- **Worked with entities to ensure that they implement their activities**, which include end-to-end testing, establishment of program management offices, and other key actions specific to the remediation status of the mission critical systems.
- **Implemented a tracking process** to monitor the progress of State entities as they implemented the action items resulting from the detailed department assessments and the high level IV&V review.
- **Implemented Continuity Planning for Business Methodologies** to standardize the level of preparation and reporting associated with continuity and business resumption efforts.
- **Conducted sessions with entities in preparation for periodic Legislature hearings** to review department and agency Y2K status.

From July to October 1999, DOIT accomplished the following:

- **Independent Verification and Validation** – Implemented and completed the planned statewide Y2K IV&V process to ensure that State remediation efforts for mission critical systems are measured consistently.

- **Remediation Status** – Achieved a 95% remediation status for mission critical systems on September 1, 1999, which was a self-imposed milestone, and implemented specific actions and a heightened monitoring process for those entities not complete with their remediation efforts. October 13, 1999, marked 96.5% remediation of mission critical systems.
- **Event Management Center Communications Center** – Designed a centralized communications center to facilitate collection of technology-related Y2K event-related information, and timely reporting of information to key stakeholders.
- **Continuity Planning for Business –** Received 44 of the 45 requested CPB plans from those entities with mission critical systems and 67 of the 68 requested from State entities with department-critical systems as of October 13, 1999. A supplement providing CPB statistics current through October 15, 1999, was provided to the Legislature October 29, 1999.
- **Web Site** – Redesigned the State's Year 2000 website to provide additional communication vehicles to the DOIT and the Y2K PMO, as well as to facilitate exchange and reporting of entity status information. Also, information to facilitate communication with the Legislature and their constituents, State government, local governments, and the general public was added.
- **Communications –** Conducted several outreach activities, including industry-specific Roundtables, Y2K preparedness and business continuity planning conferences, distribution of Y2K newsletters to State technology staff, and preparation of collateral materials. These communication activities conveyed the DOIT's key messages in a consistent manner.

From October 1999 to January 2000, DOIT accomplished the following:

- **Readiness Status** – Achieved a 100% readiness status for mission critical systems. The Y2K PMO proactively tracked and monitored the corrective action plan (CAP) process to ensure that the goal of 100% readiness would be met. The entity remediation status was posted and updated on the Y2K website on a weekly timeframe.
- **EMC Communication Center** – Developed and operationalized the EMC Communications Center to serve as the focal point for collecting and providing information regarding Y2K-related technology incidents. This effort required the development of standardized processes to record and respond to incidents reported. Physical layout planning, infrastructure identification and securing of resources, and staff planning were major parts of the development of the EMC Communications Center. Additionally, the Incident Management System (IMS), which is a sub-system of OES's regular incident tracking system, captured information specific to incidents as they were made known to the EMC Communications Center. Several training sessions were provided to familiarize staff with the procedures, and simulations were conducted to prepare staff for possible scenarios that might occur during the rollover.

- **Operation of the EMC Communication Center –** The EMC Communications Center successfully operated during the rollover period. More than 15 employees from the DOIT and other key entities staffed the EMC Communications Center on a 24-hour basis from 8:00 (PST) Friday, December 31, 1999 through 17:00 (PST) on Tuesday, January 4, 2000. The EMC Communications Center will continue to monitor activities with minimal staff during normal business hours through March 1, 2000.
- **CPB –** Received Year 2000 Readiness Certification forms from all participating entities. This includes the 45 entities having mission critical processes and the 68 entities having non-mission critical processes. All CPBs were scanned for conformance to the CPB template, and feedback was provided to each entity. Additionally, OES reviewed the CPB plans of 50 entities with emergency plans requiring coordination with OES.
- **Communications** – Developed and distributed an IT newsletter on a biweekly basis to State IT professionals. The newsletter discussed Y2K success stories, as well as provided information relating to important Y2K initiatives. Brochures, bulletins, articles, and envelope inserts were developed and posted on the year2000.ca.gov website to assist entities in their efforts of communicating frequently asked questions about Y2K and the State process for remediation to their constituents. Weekly entity CIO meetings were continued to discuss relevant Y2K issues, and meetings with county CIOs were held on a biweekly basis.
- **Governor's Y2K Business Council** – The State continued its participation in the Governor's Y2K Business Council in order to ensure that best practices were followed throughout the State's program. This council's advice and consultation was critical to the success of the State's Y2K efforts.
- **Y2K and Beyond Executive Leadership Forum –** On November 18, 1999, the DOIT in partnership with the Governor's Office of Innovation in Government co-sponsored the first in a series of Executive Leadership Forums. The forum brought together key California State executives to share best practices and promote a more efficient and effective State government.
- **Security Conference –** Hosted a three-day IT security conference that was attended by State IT professionals. The conference was conducted by an external vendor and provided information pertaining to IT security measures to be taken over the rollover period and in the future.
- **GartnerGroup Ratings** – As a result of a high-level independent review of the DOIT's Y2K program, the GartnerGroup found the DOIT's Y2K program to be in high conformance with GartnerGroup's Y2K project management office best practices. Of the nine areas reviewed, the DOIT received the highest rating possible in eight areas. The one remaining area received the second highest rating possible, and measures were instituted to raise that area as well. The measures included close monitoring of third party suppliers by State entities.

- **Website Recognition** – Received a website of the week award from Computer Currents Interactive (online magazine) for the year2000.ca.gov website. The website was recognized for its originality, content, and quality.

Appendix B

Mission Critical System Status

The following information alphabetically lists the 38 entities with systems deemed mission critical:

- Consumer Affairs, Department of
- Control, Board of
- Corporations, Department of
- Corrections, California Department of
- Developmental Services, Department of
- Education, Department of
- Emergency Services, Office of
- Energy Commission, California
- Employment Development Department
- Equalization, Board of
- Fish & Game, Department of
- Food & Agriculture, Department of
- Forestry and Fire Protection, Department of
- Franchise Tax Board
- General Services, Department of Telecom
- General Services, Department of: Facilities, Real Estate & IT
- Health and Human Services Data Center
- Health Services, Department of
- Highway Patrol, California Department of
- Industrial Relations, Department of
- Justice, Department of
- Lands Commission, State
- Mental Health, Department of
- Military Department
- Motor Vehicles, Department of
- Public Utilities Commission
- Rehabilitation, Department of
- Science and Industry, Museum of
- Social Services, Department of
- State Treasurer's Office
- Stephen P. Teale Data Center
- Teacher Credentialing, California Commission on
- Teacher's Retirement System, State
- Toxic Substance Control
- Transportation, Department of (Caltrans)
- Veteran's Affairs, Department of
- Water Resources, Department of
- Youth Authority, Department of the

Appendix C

Continuity Planning for Business Status

The information contained in Appendix C lists those entities having mission critical processes.

- Air Resources Board
- Consumer Affairs, Department of
- Control, Board of
- Corporations, Department of
- Corrections, California Department of
- Developmental Services, Department of
- Education, Department of
- Emergency Medical Services Authority
- Emergency Services, Office of
- Energy Commission, California
- Employment Development Department
- Equalization, Board of
- Fish & Game, Department of
- Food & Agriculture, Department of
- Forestry and Fire Protection, Department of
- Franchise Tax Board
- General Services, Department of Telecom
- General Services, Department of: Facilities, Real Estate & IT
- Health and Human Services Data Center
- Health Services, Department of
- Highway Patrol, California Department of
- Industrial Relations, Department of
- Justice, Department of
- Lands Commission, State
- Lottery Commission, California State
- Mental Health, Department of
- Military Department
- Motor Vehicles, Department of
- Public Utilities Commission
- Rehabilitation, Department of
- Science and Industry, Museum of
- Social Services, Department of
- State Controller's Office
- State Treasurer's Office
- Stephen P. Teale Data Center
- Student Aid Commission, California
- Teacher Credentialing, California Commission on
- Teacher's Retirement System, State
- Toxic Substance Control
- Transportation, Department of (Caltrans)
- Veteran's Affairs, Department of
- Water Resources, Department of
- Youth and Adult Correctional Agency
- Youth Authority, Department of the
- Youthful Offender Parole Board

Appendix D

Testing

The information in Appendix D is a listing of those entities reporting high profile interfaces.

Entity Name	Number of High Profile Interfaces
• Alcohol and Drug Programs, Department of	1
• Conservation, Department of	2
• Developmental Services, Department of	1
• Emergency Services, Governor's Office	1
• Employment Development Department	30
• Equalization, Board of	1
• Fish & Game, Department of	4
• Forestry & Fire Protection, Department of	1
• Health Services, Department of	5
• Industrial Relations, Department of	1
• Lottery, California State	5
• Motor Vehicles, Department of	12
• Parks and Recreation, Department of	1
• Real Estate, Department of	1
• Social Services, Department of	3
• State Treasurer's Office	3
• Teacher Credentialing, CA Commission on	3
• Criminal Justice Planning, Office of	1
Grand Total*	76
* These numbers do not include the State Controller's Office's high profile interfaces, as they indicate that every SCO interface is high profile.	

Appendix E

Governor's Executive Order

EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA

EXECUTIVE ORDER D-3-99
by the
Governor of the State of California

WHEREAS, the State of California utilizes numerous information technology systems to provide for the health, welfare and public safety of all Californians; and

WHEREAS, the year 2000 problem, whereby computers are unable to recognize dates beyond 1999, has the potential to significantly disrupt information technology systems and automated devices throughout the world; and

WHEREAS, the ability of California government to deliver vital services and protection to the public is greatly compromised unless the State addresses on a timely basis Year 2000 impacts on its mission-critical automated systems; and

WHEREAS, this Administration believes it has the responsibility, duty and means to coordinate and develop a comprehensive solution to the State's Year 2000 problem; and

WHEREAS, this Administration understands that the Year 2000 issue must be addressed thoroughly and effectively, encompassing, at a minimum, economic, environmental and public safety impacts and do so in a manner that maintains public confidence; and

WHEREAS, this Administration has undertaken a comprehensive reevaluation of the status of state government's Year 2000 efforts and, in turn, simultaneously plans to deploy the organization and resources necessary to complete the State's Year 2000 preparedness; and

WHEREAS, the enormity and complexity of detecting, fixing, testing and implementing Year 2000 solutions, in light of an inflexible deadline, makes time of the essence;

NOW, THEREFORE, I, GRAY DAVIS, Governor of the State of California, by virtue of the power vested in me by the Constitution and statutes of the State of California, do hereby issue this order to become effective immediately:

1. Year 2000 solutions shall be the State's top technology priority; each agency shall defer commencing any new non-Year 2000 computer project that is not required by law; and this deferral applies to any project previously approved with a condition that project commencement could not occur until Year 2000 compliance was obtained; and

2. In testing each mission-critical system, each agency shall utilize commercially available testing tools where the use of such tools is clearly justified on a business decision basis; and

3. In developing effective and comprehensive business continuity plans, each agency shall ensure that its plan provides for the continuous delivery of essential public services in the event of a Year 2000 failure, including a failure which could occur externally; and

4. There is established a Year 2000 Executive Committee to assume statewide leadership, coordination and oversight responsibilities of Year 2000 activities; and

5. The Year 2000 Executive Committee shall be chaired by the Governor's Staff Director and comprised of the Secretary of the Cabinet, the Communications Director, the Legal Affairs Secretary, the Policy Director, the State Chief Information Officer, the Director of Finance, the Director of the Office of Emergency Services, and a non-voting Advisor for Information Technology; and

6. The Year 2000 Executive Committee may invite key stakeholders from federal, Sate and local government, non-profit organizations and small businesses to provide insight and input; and

7. The status of the State's Year 2000 efforts shall be immediately and comprehensively reevaluated under the direction of the Year 2000 Executive Committee; and

8. The Year 2000 Executive Committee may establish a process for considering exemptions to Directive 1 of this Executive Order regarding the commencement of new non-Year 2000 computer projects; and

9. The Year 2000 Executive Committee shall convene a Year 2000 Business Continuity Task Force that will create a statewide business continuity plan to address the delivery of essential services relying on the coordination of multiple jurisdictions, and to address potential failures of utilities, water, transportation, telecommunication and emergency services; and

10. There is established a Year 2000 Business Council to provide ongoing review of the State's Year 2000 strategies, plans and progress and to contribute best practices and proven solutions; and

11. Members of the California Year 2000 Business Council shall be appointed by the Governor and represent the "best and brightest" Year 2000 strategists from the private sector; and

12. There is established a Year 2000 Project Office to coordinate and assess departmental Year 2000 efforts, provide detailed and timely information regarding the Year 2000 projects and serve as a resource for State agencies; and

13. The Year 2000 Project Office shall work at the direction of the Year 2000 Executive Committee and be supported by the Department of Information Technology; and

14. There is established a Year 2000 Emergency Preparedness Task Force to guide State agencies and to work with federal, county and municipal governments in assessing Year 2000 risks and developing worst-case scenarios that might cause significant interruption to government services or constitute public emergencies; and

15. The Year 2000 Emergency Preparedness Task Force will be chaired by the Governor's Office of Emergency Services and be comprised of representatives from public and private sector organizations critical to emergency preparedness; and

16. The Office of Emergency Services shall manage the response to any public emergencies resulting from Year 2000 computer failures; and

17. There is established a Year 2000 Communications and Outreach Task Force to coordinate communications to the public, Legislature and media; and

18. The Year 2000 Communications and Outreach Task Force shall be chaired by the Governor's Communications Director and comprised of public information officers from the Department of Information Technology, the Health and Welfare Data Center, the Stephen P. Teale Data Center and the Department of Finance; and

19. The Year 2000 communications and Outreach Task Force may invite key stakeholders from Executive Branch departments, boards and commissions, Constitutional Offices, and the University of California and California State University systems to provide insight and input; and

20. State agencies shall not purchase new systems, hardware, software, or equipment that is not Year 2000 compliant or fails to contain Year 2000 contract language; and

21. This Executive Order supercedes Executive Order W-163-97; and

22. Unless subsequently extended, this Executive Order shall sunset June 30, 2001.